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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,801

11/21/2005

Masakazu Funahashi

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STEPTOE & JOHNSON LLP  
1330 CONNECTICUT AVENUE, N.W.  
WASHINGTON, DC 20036

EXAMINER

GARRETT, DAWN L

ART UNIT

PAPER NUMBER

1786

MAIL DATE

DELIVERY MODE

12/21/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,801	<b>Applicant(s)</b> FUNAHASHI, MASAKAZU	
	<b>Examiner</b> Dawn Garrett	<b>Art Unit</b> 1786	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2,5,8 and 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,5,8 and 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Continued Examination Under 37 CFR 1.114**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 14, 2010 has been entered.
2. The amendment filed October 14, 2010 has been entered. Claims 1, 3, 4, 6, 7, and 9 are cancelled. Claims 16-18 were newly added. Claims 2, 5, 8, and 10-18 are pending.
3. The obviousness double patenting rejection over U.S. 7,651,786 (application number 10/617,397) was withdrawn due to the terminal disclaimer filed August 16, 2010 as noted in the Advisory Action mailed August 26, 2010.
4. The provisional rejection of claims 2, 5, 8 and 10 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 28, 31, 38, 41, 49 of copending Application No. 11/207,933 is withdrawn.

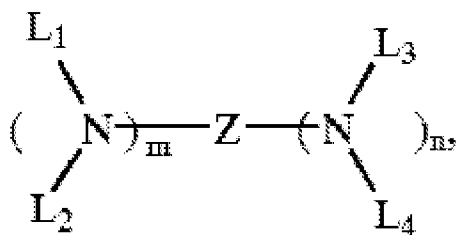
### **Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2, 5, 8, and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al. (US 2003/0118866 A1). Oh et al. discloses organic electroluminescent devices comprising the following formula (see par. 29):



Z is A<sub>1</sub> (see par. 31), which may be a substituted aromatic hydrocarbon group (see par. 32).

Pyrene groups are specifically recognized as aromatic groups for A<sub>1</sub> (see pages 4 and 5). The L variables include substituted aromatic hydrocarbon groups (see par. 35). The each substituent group on the L variable groups may include alkyl or cycloalkyl such as t-butyl (branched alkyl with three carbon atoms), i-propyl, and cyclohexyl (cycloalkyl having more than 3 carbon atoms) (see page 6, par. 73). Oh et al. does not exemplify a compound according to the formula comprising pyrene as Z with the nitrogens bonded at the 1 and 6 positions; however, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a compound having Z as a pyrene group, because Oh et al. clearly recognizes pyrene as an aromatic group and as a group suitable for forming the compound. Oh et al. also does not exemplify L groups comprised of substituted phenyl groups wherein there are two substituents on a single phenyl group; however, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a compound having two substituent groups on the L

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phenyl groups, because Oh et al. clearly teach the L groups may be substituted with groups such as alkyl and cycloalkyl. One would expect to achieve a functional compound within the disclosure set forth by Oh et al.

Regarding claims 10-15, the compound is in a layer where the compound may be a main component of the layer or contained in an amount of 20 wt % or less (see abstract, par. 27 and par. 29).

Regarding claims 16 and 17, amine derivatives disclosed by Oh et al. are considered to be capable of emitting blue light, since amine derivatives within the definition set forth in the instant claims are rendered obvious. The property of capability of light emission and color of emission are considered inherent to an individual compound. Furthermore, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristics relied on (see *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 229 (CCPA 1971). Additionally, recitation of a newly disclosed property does not distinguish over a reference disclosure of the article or composition claims. *General Electric v. Jewe Incandescent Lamp Co.*, 67 USPQ 155. *Titanium Metal Corp. v. Banner*, 227 USPQ 773. Applicant bears responsibility for proving that reference composition does not possess the characteristics recited in the claims. *In re Fitzgerald*, 205 USPQ 597, *In re Best*, 195 USPQ 430.

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7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al. (US 2003/0118866 A1) in view of Hoag et al. (US 6,661,023).

Oh et al. discloses red light emitting guest materials are preferred and does not specifically mention using blue dopants as guest material to achieve blue emission from an electroluminescent device. Hoag et al. teaches, in analogous art, that light emitting layers commonly consist of host material doped with a guest wherein any color of emission may be obtained through selection of the guest material (see col. 16, lines 41-46). Dopants may include various fluorescent compounds, including blue emitters (see col. 19, lines 1-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected a blue fluorescent dopant as a guest material for an electroluminescent device, because one would expect to achieve a predictable, functioning device with a desired emission color. The use of a blue dopant in a device in place of a red dopant is a simple substitution of one known element for another having the same function.

### **Double Patenting**

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

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ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 2, 5, 8, 10 and 12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 9, 10, 11, 15, 19, 20, 24, and 25 of U.S. Patent No. 7,732,063 (Application No. 11/761,437). Although the conflicting claims are not identical, they are not patentably distinct from each other because the compounds of the instant claims are within the definition for the amine compounds of an EL device of '063. X3 of '063 may be pyrene. Ar5 and Ar6 of '437 may be substituted aromatic groups. Ar15-A18 of '063 are substituent groups that may be present in a number of 2 or greater.

10. Claims 2, 5, 8 and 10-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 11/596,299. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compounds of the instant claims are within the definition for the amine compounds of an EL device of '299. Ar1-Ar4 of '299 are substituent groups that may be present in a number of 2 or greater.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### **Response to Arguments**

11. Applicant's arguments filed October 14, 2010 have been fully considered but they are not persuasive.

Applicant argues Oh does not mention bonding to the pyrene at the 1-position and 6-position and does not require that at least one of A1 and A2 is an alkyl or cycloalkyl group. The examiner maintains Oh renders obvious the required pyrene group (including bonding at any of the locations on the ring) and the substituent groups as required. Applicant has not shown clear and conclusive evidence of superior, unexpected results when selecting the particular pyrene bonding positions and substituent groups. Applicant alleges superior results, but the examiner submits the data is not sufficient to demonstrate clearly unexpected results, because the examples and comparison examples are too few in number to clearly establish a superior and unexpected pattern of performance. The data is not commensurate in scope with the breadth of the claimed subject matter.

Claims 16 and 17 recite the amine compound is capable of blue emission. Applicant argues the Oh host materials emit above 500 nm. The examiner submits that 500 nm is in the blue emission range and immediately above 500 is considered to also be in a blue-green range. Applicant has not claimed a particular wavelength number and the teaching by Oh is within the general range. Also, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristics relied on (see *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 229 (CCPA 1971)). Additionally,



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recitation of a newly disclosed property does not distinguish over a reference disclosure of the article or composition claims. *General Electric v. Jewe Incandescent Lamp Co.*, 67 USPQ 155. *Titanium Metal Corp. v. Banner*, 227 USPQ 773. Applicant bears responsibility for proving that reference composition does not possess the characteristics recited in the claims. *In re Fitzgerald*, 205 USPQ 597, *In re Best*, 195 USPQ 430. Applicant has not demonstrated that compounds rendered obvious by Oh are not capable of emitting in a blue emission range.

The examiner notes the obviousness double patenting rejection over application 11/761,437 is no longer a provisional rejection, since the application has now issued as U.S. Patent No. 7,732,063.

### **Conclusion**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dawn Garrett/  
Primary Examiner, Art Unit 1786

December 16, 2010